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OBSERVATION

ON THE

DISEASES, DEFECTS, AND INJURIES

IN ALL KINDS OF

FRUIT AND FOREST TREES.

WITH AN ACCOUNT OF A

PARTICULAR METHOD OF CURE

INVENTED AND PRACTISED

BY

WILLIAM FORSYTH,

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GARDENER TO HIS MAJESTY
AT KENSINGTON.

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INTRODUCTION.

IT redounds very much to the general honour of the Britiſh nation, as well as to the particular credit of the Society for the Encouragement of Arts, Manufactures and Commerce, and ſeveral other aſſociations for the advancement of Agriculture, &c. that the face of this country has, in the courſe of the preſent century, received ſo much improvement, and ſuch added beauty. The premiums and honorary marks of diſtinction, held forth by theſe ſocieties, have excited a ſpirit of emulation, or ſuggeſted a ſpirit of improvement, among perſons of every rank of life, which have been productive of many diſcoveries of no common benefit, in their preſent effects, and of great expectation from their future conſequences, to the community at large.

But notwithſtanding the ſtrides which modern agriculture has made towards perfection, in many parts of it—there is one particular and very intereſting branch of this ſcience, which improvement has not yet embraced, viz. the growth of timber, and the culture and management of plantations, both of fruit and foreſt trees.

The profeſſion of a gardener has been the employment of my life; and, during a long ſucceſſion of years, it has been an object of my particular ſtudy, to inveſtigate and diſcover the cauſes of thoſe various defects and diſeaſes to which all kinds of trees are more or leſs ſubject, and the injuries reſulting from them, by obſtructing the fertility of fruit trees, and diminiſhing the quantity, as well as quality, of timber in foreſt trees.

Having acquired a competent knowledge of the evil in all its appearances and effects, my attention proceeded to ſearch after ſuch a remedy, as might not only counteract the progreſs of theſe diſeaſes, in fruit and foreſt trees, but alſo afford Nature ſuch powerful aſſiſtance, that ſhe might be enabled to renovate, as it were, fertility in the one, and ſound timber in the other. Of my ſucceſs in theſe endeavours to promote the general advantage of this country in a matter ſo connected with its beſt intereſts, I have that clear conviction, which I truſt will be hereafter communicated to every part of the kingdom, where the application of my experience ſhall be made and proſecuted.

The inquiſitive ſpirit which accompanied my profeſſional purſuits, with the natural deſire of improving my private practice in the management of the various kinds of trees under my care, led me by degrees to this diſcovery. The idea, however, of making it public never occurred to me, till the many trials and experiments I had repeatedly made, both on fruit and foreſt trees in the Royal Gardens at Kenſington, had attracted the notice of many perſons of high rank, as well as philoſophical eminence, and prompted them to favour it with a particular examination. Their inveſtigation of my proceſs and method of curing the defects and injuries which, from various cauſes, thoſe trees had ſuſtained, by producing conviction in their minds, gave the moſt flattering encouragement to me. Indeed, the application of the remedy had been attended with ſuch uninterrupted ſucceſs, that its ſalutary and certain effects were evident to every one who favoured it with an attentive obſervation. Many even who viſited me, with the moſt decided opinions againſt the ſucceſsful application of any remedy for trees in a very advanced ſtate of decay, did not heſitate, on an inveſtigation of the ſubject, to acknowledge that their prejudices were not only removed, but that their judgments were perfectly convinced of the powerful efficacy of the diſcovery, and the very great advantages which, both in an individual and a national view, might be derived from it.

Among the more early inquirers, were the Commiſſioners appointed by Parliament to examine into the ſtate of the woods, foreſts, and land revenues of the crown; who, in the courſe of their ſurveys, had found a great number of trees in the Royal Foreſts to be materially injured, and their anxiety to prevent the loſs or further damage of ſo much valuable timber, induced them to honour me with a letter * concerning the effects of injuries done to oak trees, and the means of preventing or curing defects in timber, from the various cauſes therein ſtated.

In reply to this inquiry of the Commiſſioners I did myſelf the honour of addreſſing them two ſucceſſive letters. †

Shortly after the date of theſe letters, the Commiſſioners favoured me with a viſit at Kenſington, to examine the proceſs and mode of cure which I had adopted, as well as the effects which my remedy had produced on trees of various kinds and ages, to which it had been applied. Thoſe gentlemen ſeemed, in a moſt particular manner, to intereſt themſelves in aſcertaining the utility and benefit that might ariſe from the application of it to many thouſand valuable trees in his Majeſty's woods and foreſts, which had received injuries of ſuch a kind, as, if left to the unaſſiſted efforts of Nature, would occa-

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* See No. I. of the Appendix.

† See No. II. and III. of the Appendix.

ſion a very conſiderable diminution in the value and quality of the timber, and might even terminate in their entire ruin.

This very attentive and minute examination of the ſeveral objects of their inquiry, being followed by the cleareſt conviction of the great public utility which would reſult from a general application of the remedy, the Commiſſioners were pleaſed to make a repreſentation of it to the Lords of his Majeſty's Treaſury, under whoſe ſanction it was ſubmitted to the conſideration of the Houſe of Commons by Mr. Roſe, on the 24th of July, 1789; and, on his motion, an humble addreſs was preſented by that honourable Houſe, to his Majeſty, on the ſubject.*

In conſequence of this addreſs, a Committee of Members of both Houſes of Parliament undertook, at the inſtance of the Lords of the Treaſury, to inveſtigate the efficacy of my compoſition; for which purpoſe, they moſt attentively examined the ſtate, condition, and progreſs, of cure, of the decayed and injured trees in Kenſington

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* See No. IV. of the Appendix.

ton Gardens, to which it had been applied, in experiments of various kinds, for upwards of ſeven preceding years; and, after having, by a very full inquiry, ſtrict inveſtigation, and the moſt minute attention, ſatisfied their minds in every particular, they reported to the Lords of the Treaſury the reſult of their examination, expreſſing their unanimous opinion and conviction, that the compoſition was a diſcovery which might be rendered highly beneficial both to individuals and the public. That report, and alſo a letter previouſly written to the Committee by the Commiſſioners of the Land Revenue, of which I have been favoured with copies, are, for the further information of the public, inſerted in the Appendix.*

Having been thus honoured by the unanimous approbation of perſons ſo reſpectable for their rank, character and knowledge, I proceeded to exert myſelf in making various additional trials and experiments, to enable me to give farther proofs of the efficacy of my compoſition, in reſtoring the powers of vegetation in trees ſo far decayed as to be of no value as timber, but which, from their ſituation as a ſcreen, or as compoſing part of a general uniform appearance in the Royal Gardens, it became a deſirable object to preſerve. Nor were my endeavours leſs ſucceſsful in this ſubordinate experiment, than they had been in thoſe which were directed by circumſtances of ſuperior intereſts; for I had the very great ſatisfaction to find, that, in conſequence of my treatment of trees in that ſtate of decay which has juſt been ſpecified, a few years growth has filled up unſightly chaſms, and reſtored that uniformity to their local poſition, which young plants, ſet in their places, would not have accompliſhed in a long courſe of ſucceſſive years.

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* See No. V. of the Appendix.

The report of the Committee having been laid before his Majeſty, in conſideration of the great utility and advantage which muſt ariſe to the country at large from the uſe of this compoſition, his Majeſty was moſt graciouſly pleaſed to order a reward to be given to the author, for making known to the public the materials of which it is compoſed, with the method of preparing it, as well as the mode of its application; and in order to diffuſe the benefits of this diſcovery throughout the kingdom, an advertiſement * has been inſerted in the London Gazette, and in moſt of the town and country newspapers.

The very great importance to this country of ſecuring a continued ſucceſſion of good, healthy, and well-growing foreſt trees, producing ſound, unblemiſhed timber, for ſupplying the various wants of the public, muſt be evident to every man's reflection; nor need it be obſerved, that numberleſs large trees, in the woods, parks, and foreſts, of this kingdom, are, from various cauſes, rendered unfit for uſe, and the timber ſo much damaged as to occaſion a conſiderable diminution in its value. This evil ariſes, in ſome inſtances, from unſkilful management, and in others, from external accidents; among which are the ruinous effects of hurricanes and high winds, when the trees are generally left,

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* See No. VIII. in the Appendix.

in their wounded and disfigured ſtate, to the accelerated operations of inevitable decay. It alſo not unfrequently happens, that the heirs of great eſtates, on coming to the poſſeſſion of them, order great numbers of trees to be promiſcuouſly felled, before they have attained a ſtate of maturity, without paying the leaſt attention to provide a ſucceſſion of young trees to ſupply their place; and by ſuch inexcuſable negligence defeating the ends propoſed by the provident care and wiſdom of their anceſtors, depriving the public of a valuable ſource of timber, either for domeſtic purpoſes or national uſe, and reducing their country to a dependance on foreign produce for ſupplying the demands of her fleets and manufactures.

I ſhall eſteem myſelf moſt happy, if in giving this tribute of information to the general ſtock of public improvement, I ſhould promote an influence that may excite noblemen and gentlemen, and the proprietors of land of every denomination throughout the kingdom, to be actively ſolicitous in planting and preſerving oak timber, the native growth of their country, that Great Britain may never be under the dangerous as well as diſgraceful neceſſity of truſting the ſafety of her ſeamen to the inferior texture and leſs durable quality of foreign growths; while the hardy oaks of England, which for ages paſt have been conſidered as affording the beſt timber in the world for this building, and may be ſaid to have brought home victory and commerce from every part of the globe, are no longer ſuffered to diminiſh, as they have done of late, to the manifeſt detriment and diſhonour of our country.

Such an evil, and it is of no common magnitude, proceeds from the negligence and inattention of the landed men, who, from a ſpirit of patriotic ambition, as well as private intereſt, ſhould pay a very vigilant attention to the maintaining a ſucceſſion of healthy, well growing timber, for the ſervice of their country, nor any longer ſuffer the internal reſources of the kingdom to fail in furniſhing materials for that great national object, the ſupport of the Britiſh navy, as well as for the many various demands of domeſtic utility. By making ſuch a proviſion for the public wants, they will add to their own immediate wealth, as well as to the fortunes of thoſe who come after them.: and while I expreſs my wiſhes that ſuch general good deſigns may be put in univerſal practice, I may expreſs my belief that the diſcovery which I have made, and is now divulged to the public, will facilitate the means of proſecuting them, to the eſſential advantage of the Britiſh empire.

GENERAL OBSERVATIONS

ON THE

DISEASES, DEFECTS, AND INJURIES

OF ALL KINDS OF

FRUIT AND FOREST TREES.

IN the courſe of more than thirty years practice in cultivating, pruning, and keeping of garden fruit trees, I have obſerved that, from natural cauſes, accidents, and unſkilful management, they were ſubject to injuries of different kinds, which always diminiſhed their fertility, and frequently rendered them wholly unproductive.

All trees, which bear ſtone fruits, are liable to emit a gum, that, by producing a canker, proves fatal to the health and vegetation of the tree. Moſt foreſt trees are alſo liable to what is called a bleeding, which proceeds from any injuries that obſtruct the circulation of the juices. Of thoſe which ſuffer from bad management or accidents, ſome are injured by unſkilful pruning, and lopping, at improper ſeaſons of the year; and others by the violence of high winds, having boughs or limbs torn from their bodies, which being left in that ſtate, expoſed to all the inclemency of hard froſts, are often cracked or rent in the wood, or being waſted and ſoaked by rains, the wounds imbibe ſo large a quantity of wet and moiſture, as, by cauſing a fermentation with the natural juices, brings on diſeaſe, and deſtroys the health and vegetation of the tree. Theſe, among other cauſes, tend to produce decay and barrenneſs in fruit trees, as well as defects in timber, to the great loſs of the public in general, as well as eſſential injury to the individual proprietor.

To remove theſe evils, and to prevent the ill conſequences ariſing from the cauſes already deſcribed, I ſubmit to the experience of the public, a remedy diſcovered by myſelf, which has been applied with never-failing ſucceſs to all kinds of fruit trees, and has not only prevented further decay, but actually reſtored vegetation and increaſed fruitfulneſs, even in ſuch as were apparently barren and decayed. It produces alſo a ſimilar effect on foreſt trees, by reſtoring them to ſoundneſs of timber and healthful vegetation, and covering as it were viſible nakedneſs and increaſing decay, by freſh vigorous foliage.

This remedy is a compoſition, applied in the manner of a plaiſter to the wounded or injured part of the tree: it is of a ſoft and healing nature, poſſeſſes an abſorbent and adheſive quality, and, by reſiſting the force of waſhing rains, the contraction of nipping froſts, and the effects of a warm ſun or drying winds, excludes the pernicious influence of a changeable atmoſphere.

The diſcovery of it is the reſult of much reflection and ſtudy during a long courſe of years, and of a great variety of experiments, made, at a very conſiderable expence, to aſcertain the efficacious powers of the application. Nor ſhall I heſitate a moment to declare my firm belief, that wherever it ſhall be properly employed, by the proprietors of gardens, orchards and woods, it will be productive of all the advantage which can be derived from reſtoring as well as preſerving vigour and fertility in all kinds of fruit trees, as alſo from preventing decay, and promoting health and ſound timber in every ſpecies of foreſt trees: and how great that advantage may be, it is in the capacity of every one to determine.

ON THE

MANAGEMENT

OF

FRUIT AND FOREST TREES.

THE received opinion and conſtant practice of moſt profeſſional men has been to prune or lop their trees, from the month of October, when the juices have been exhauſted by the ſummer foliage, autumnal fruit, and general nouriſhment of the body of the tree, until the month of March, when the ſap or juices, re-invigorated by Nature, during the winter's repoſe, begin to re-aſcend and perform the annual function of cloathing it with freſh foliage, bloſſoms and fruit. The reaſon of this practice is, that the ſap being fallen at that ſeaſon of the year, it has been conſidered as the moſt proper period to lop off all ſuperfluous growths; and the efforts of Nature to heal the wounds thus neceſſarily given, (before the riſing of the ſap in the following ſpring) have been judged beſt for the ſafety and health of the tree. The danger of performing this ſervice, when the juices are in a more vigorous flow, as in the months of May, June, and July, has been dreaded, from a fear of its occaſioning a waſte of the nutritive juices, diſcharging themſelves through the wounds, to the impoveriſhment and injury, if not to the ruin of the tree.

The pruning of fruit trees, and the lopping off large branches from foreſt trees, during the winter ſeaſon, has alſo been frequently attended with great hurt and impediment to their health and vegetation; the wounds being expoſed to all the rigours of an inclement ſeaſon, and thereby contracting thoſe diſeaſes which contain the principles of decay. Hence it is that ſuch numbers of foreſt trees are continually injured in their value for public uſes, either by unſkilful management, and purpoſed depredation, or from the violence of boiſterous winds, when their limbs and branches being torn off, the trees are left in that unprotected ſtate to imbibe the ſeeds of decay and rottenneſs, which will in time pervade their very heart, and render them unfit for any of thoſe valuable purpoſes for which Nature, by their frame and texture, appears to have deſigned them.

It may alſo be obſerved, that where branches have been cut off from the body of a tree, even at the diſtance of two or more feet from the trunk, with a view to prevent injury to the timber, yet that method has not been found effectual to ſave the tree from very material detriment, as the remaining ſtem of the branch ſo cut away, dying ſoon after, becomes a ready conduit for conveying pernicious moiſture and diſeaſe to that part of the tree with which it is connected, and ſo on, in time, to the whole.

The practice of others in lopping their trees cloſe to the trunk, and dreſſing the part ſmooth and even, has leſs objections than the former; nevertheleſs even according to this method, the tree is liable to injury. The efforts of Nature, to heal the wounds thus given, diſcovers itſelf by encircling the wound with a kind of callus or lip, which increaſing in ſize, and ſwelling out from the annual flow of the juices, forms an hollow or cavity of the central part, where the rain or ſnow is very apt to lodge, and penetrating between the bark and the wood, dried or cracked by an hard froſt or a warm ſun, promotes that fermentation with the natural juices, which is the certain ſource of diſeaſe and decay.

Young, healthful, and vigorous trees, when they have been injured by being wantonly cut through the bark, or from other cauſes, will ſometimes recover themſelves, and to all outward appearance, be reſtored to their original ſoundneſs; but when cut into planks and boards, internal blemiſhes and faults are diſcovered in them, which appear to have been occaſioned by the early injuries which the tree had received; the texture of the wood not uniting where the wound was originally given; though, from the youthful vigour of nature, the bark has cloſed, and an external cure been evidently performed.

As a moſt efficacious remedy to prevent the evils I have deſcribed, with all their deſtructive conſequences, and to reſtore ſound timber, where the ſymptoms of decay are already apparent, I confidently recommend the uſe of my compoſition, which being applied as a plaiſter to the wounded or injured part, will infallibly prevent the bleeding of trees, or the oozing of the juices, through the wounds of limbs or branches which have been cut off in the middle of Summer, when they are in their higheſt vigour and moſt rapid flow of vegetation: by which means, any waſteful diſcharge of the juices is prevented, and they are thereby duly confined to their natural operations of giving nouriſhment, growth, and fertility to their reſpective bodies.

By employing the propoſed remedy, trees of all kinds, whether in gardens or orchards, in parks or foreſts, may with greater ſafety and advantage be pruned or lopped in the Spring, or early in the Summer, than in the Winter ſeaſon; as the plaiſter, when properly applied, repels the flow of the juices through the wound, cauſes a more active vegetation, and aſſiſts Nature more powerfully in healing the wound, at the time the ſap is in full vigour, than when it is on the decline, as in Autumn and Winter.

It is alſo neceſſary to remark, that both fruit and foreſt trees, particularly thoſe which grow in the ſhade, are very liable to be infected with diſorders proceeding from the growth of liver-worth, and various kinds of moſs, which adhere to the outer bark of the tree, and frequently gain a conſiderable thickneſs, which not only prevents the natural flow of the juices, but cauſes a ſtagnation in the circulation, and brings on decay; that after deſtroying the outer bark, penetrates, by degrees, deeper into the wood. Where this circumſtance is obſerved, care ſhould be taken to clear the whole bark of the tree from theſe growths, and where it is infected, to ſcrape or pare it away. When the body of the tree is thus cleanſed from infection, the compoſition ſhould be rubbed by the hand over the parts ſo cleaned or pared away, not as a thick body of plaiſter, but only to cloſe the pores of the wood; when the tree will ſoon acquire a freſh bark, with improved health and vegetation.

I am confirmed in theſe opinions from the many experiments and various trials I made to aſcertain, by the moſt poſitive proofs, the properties of this compoſition, before I ventured to offer it to the public attention. Indeed, every year's experience has increaſed my conviction of its general utility, when properly applied to the purpoſes for which it is recommended. To give a more complete illuſtration of its virtues, and to place the advantages ariſing from it in a ſtronger light of information, I ſhall beg leave to ſtate a few of the very numerous experiments I have made, both on the fruit and foreſt trees, in his Majeſty's Gardens at Kenſington, where the ſalutary effects of the compoſition are evident to every attentive obſerver.

My firſt experiments were made on pear trees; ſome of which were in ſuch an advanced ſtate of barrenneſs and decay, that the wood of the ſtem or trunk was actually periſhed, and nought remained but a very ſmall quantity of bark, which afforded ſuch a ſcanty nutriment to the trees, that the fruit was ſmall and hard, of a kernelly texture, and wholly unfit for the common purpoſes of the table. In this ſtate of the trees I cut off all their branches, and left only a very ſmall portion of their ſtems above the graft. This operation was performed in the middle of ſummer, and the plaiſter applied to every wound given by the knife, as well as to thoſe parts where the rotten or decayed wood of the ſtem was cut away. The ſalutary effects of the application were ſoon viſible in the luxuriant growth of branches ſhooting from the ſtem, and their great fertility in bearing fruit of the beſt quality and fineſt flavour, in the ſecond ſummer after the operation had been performed; increaſing alſo every ſucceeding year in the quantity of their produce.

Many of theſe trees had been conſidered as abſolutely incurable by men of ſkill and judgment in the ſcience of gardening; nevertheleſs, they were ſo renovated by the proceſs and application of the remedy which I have juſt deſcribed, that, in the courſe of four or five years, they bore ſuch plenteous crops of fruit, as a young healthy tree planted in the ſame ſoil, would not have produced in four times that period.

I made ſimilar experiments, and with equal ſucceſs, in cutting and heading down other fruit trees, as apples, plumbs, cherries, apricots, peaches, nectarines, &c. and with a proportionate ſaving of time in point of produce: indeed if the ſame proceſs of preparing the trees, and application of the compoſition, ſhould be adopted, as I now truſt it will, by the proprietors and farmers of large orchards in the cyder countries, they will be rewarded by the moſt beneficial conſequences that can poſſibly reſult from any agricultural improvement.

It may be uſeful to all, but more neceſſary to thoſe who are not acquainted with the ſcience of gardening, to communicate a few inſtructions as to the right preparation of fruit trees for the reception of the plaiſter.

When they are in ſuch a ſtate as has been already deſcribed, they ſhould be headed down with a ſaw, and the place at which they were cut ſhould be ſmoothed either with a draw-knife, a chiſel, or large garden-knife, gradually ſloping the edges of the bark home to the wood. Great care ſhould alſo be taken to cut the ſtem or branches as near as poſſible to ſome of the laſt year's ſhoots or buds, if there be any; as the application of the plaiſter will increaſe the vigour of ſuch ſhoots, and force them to cover the place: but if there ſhould not be any ſhoots diſcernible near the place at which the ſeparation is propoſed, the branch may then be cut off at pleaſure; and as it will ſometimes happen that freſh ſhoots will break forth at ſome diſtance from the place where the plaiſter is applied, in ſuch a caſe the wood muſt be again cut away, ſloping it gradually down to thoſe ſhoots; more of which ſhould be left at firſt than are abſolutely wanted, to provide againſt accidents, as they are very brittle, and, when nailed to the wall too ſoon, will very frequently break, and conſequently become of no uſe.

The ſame mode of treatment may be applied to all ſorts of ſtandard trees; and when too many ſhoots ſpring forth round the edge of the plaiſter, ſome of them ſhould be rubbed off with the finger, leaving only ſuch as may be thought neceſſary for bearing fruit. By ſuch management additional ſtrength and vigour will be given to the remaining ſhoots, the natural current of the juices being thus more forcibly directed to their immediate growth and improvement.

Apple trees, in particular, are very liable to be infected with a diſeaſe called the canker, which proceeds from the acidity and acrimonious quality of their juices; eſpecially when they have received any injury from bruiſes or cutting. Wherever the diſeaſe makes its appearance, all the infected wood ſhould be cut clean away, and the plaiſter applied according to the directions already given; for if the canker is allowed to remain, it will penetrate deeper every year, till the tree is finally eat up and deſtroyed by it. I have often ſeen the young ſhoots of apple trees, which had been cut in the end of Summer or Autumn, very much infected with this diſeaſe, particularly golden pippins, Newton pippins, and nonpareils; whereas if they were cut in the Spring, and the plaiſter duly applied, they would outgrow all the pernicious conſequences reſulting from paſt neglect or error. Whenever any ſhoots are cut off, the ends ſhould be carefully rubbed over with a little of the compoſition, in order to ſhut up the pores of the wood, and thereby prevent the air and wet from penetrating into it; an omiſſion of which neceſſary precaution will in time bring on diſeaſe and decay. Theſe obſervations are equally applicable to fruit trees of every denomination.

Plumb trees, if much injured, ſhould be cut near the place where they had been budded or grafted, in order to obtain a greater quantity of young wood, which will bear fruit in the ſecond or third year; and, in a few ſucceſſive years, with proper care and attention, will cover the walls.

Cherry trees receive frequent injuries from the gum and canker. In pruning them, a few of the old branches or ſhoots ſhould always be left, to draw up the ſap, until the young ſhoots are capable of ſupplying their office, when the former may, with greater ſafety, be cut away. This precaution is neceſſary for the preſervation and health of the tree; for there can be no doubt but the part from whence the gum iſſues is diſeaſed, and that the tree is more or leſs infected by it. To prevent, therefore, the evil from increaſing, all the injured part ſhould be entirely cut away with a ſharp knife or chiſel, and the plaiſter properly applied. As a matter of general uſe, I would recommend every pruner to carry a ſmall box of the compoſition about him; and that, as he cuts the ſhoots and foot-ſtalks of the fruit, which ought not to be omitted, he ſhould rub a little of the plaiſter on every wound made by his knife, which will prevent a great deal of miſchief, keep the trees in a more healthy ſtate of vegetation, as well as add to the ſize and flavour of the fruit.

Having thus given a brief account of the very ſucceſsful application of the compoſition to all kinds of fruit trees, and deſcribed the good effects it will never fail to produce, where a due attention is given to the preparation of the trees, and the application of the plaiſter, I ſhall now proceed to mention ſome of the various experiments I have made of the compoſition on foreſt trees.

The firſt trials of its efficacy were made on ſome very large and ancient elms, many of which were in a moſt decayed ſtate, having all their upper parts broken by high winds from their trunks, which were withal ſo hollow and decayed, that a ſmall portion alone of the bark remained alive and ſound. Of theſe trees I cut away at firſt a part only of the rotten ſtuff from the hollow of the tree, and then applied the plaiſter to the place where this operation had been performed, by way of an internal coat of the compoſition. In a ſhort time, however, the efforts of nature, with a renovated flow of the juices, were clearly diſcernible in their formation of new wood, uniting with, and ſwelling, as it were, from the old, till it became a ſtrong ſupport to that part of the tree where the compoſition had been applied. I then cut away more of the rotten wood from the inſide, employing the plaiſter in the ſame manner, with the ſame good effects, and continued to uſe the knife, in proportion to the acquiſition of new wood; ſo that, from theſe decayed and naked trunks, ſtems have actually grown from their tops of above thirty feet in height, in the courſe of ſix or ſeven years from the firſt application of the compoſition; an irrefragable proof of its good effects in reſtoring decayed vegetation.

Many other elm trees, which had received hurts from bruiſes and other cauſes, and where diſeaſe and decay were already evident, after cutting away all the infected part, and duly applying the plaiſter, were ſo completely healed, that the outline of the wound is ſcarcely diſcernible on the bark, and the new wood as perfectly united to the old as if it had been originally formed with the tree.

Oak trees, alſo, which had received very conſiderable damage from various accidents, as blows, bruiſes, and cutting of deep letters; the rubbing off the bark by the ends of rollers, or wheels of carts, and mutilated branches; a perfect cure has been made, and ſound timber produced. The acidity, or corroſive quality, of the juices of oak trees, when obſtructed in their circulation from any of the cauſes already mentioned, and fermenting with the wet and moiſture imbibed by the wounds from the atmoſphere, will bring on diſeaſes, and promote decay: for, notwithſtanding the hard texture of the oak, when once the principles of decay begin to operate, the acrimonious juices feed the diſeaſe, and accelerate its progreſs, as much, perhaps, as in trees of a ſofter quality and texture; but when the diſeaſed or injured part is entirely cut away to the freſh ſound wood, and the plaiſter properly laid on, as perfect a cure has been made, as I have already related in the recovery of elm trees. Indeed, when I reflect that the oak has been the boaſt of our early anceſtors, and the means, under the bleſſing of God, of affording protection and ſafety, as well as accumulating honour and wealth to the nation, what language can ſufficiently expreſs the want of public ſpirit, and that ſtrange inattention to the preſervation and increaſe of this ſtaple tree, which ſuffers ſuch numbers of ſtately oaks to go to decay;

cay; and in that diſgraceful ſtate they remain to upbraid their poſſeſſors, as foes to the commerce and naval glory of the kingdom.

Various experiments have alſo been made on other foreſt trees, as aſh, limes, cheſnuts, and ſycamores, which had received the ſeveral injuries to which they are expoſed; as well as many of the reſinous kinds, ſuch as the cedar of Lebanon, and others of the pine tribe; in all of which I have experienced a degree of ſucceſs that exceeded my moſt ſanguine expectations.

As I feel a ſtrong ſolicitude to render my experiments of the moſt extenſive advantage to the community, and in particular to the proprietors of landed eſtates throughout the kingdom, I beg leave to recommend to their particular attention, that all foreſt trees, whether cut down with a ſaw or an axe, may be cut near to the ground; at the ſame time carefully preſerving the ſtump and roots from any further injury. The ſurface ſhould be then made quite ſmooth, rounding it in a ſmall degree, when the compoſition may be ſpread over the whole ſurface, according to the directions already given. It ſhould, however, be obſerved that the compoſition, when employed for this particular purpoſe, ſhould have an equal quantity of the powder of alabaſter mixed with the dry powder generally directed to be uſed after the plaiſter is laid on, in order to render the ſurface harder, and of courſe better able to reſiſt the bad effects of the dripping of trees, of rain, froſt, and ſnow. But this addition is by no means neceſſary in the uſual application to the ſides of trees.

In conſequence of this proceſs, the vigour of the roots will operate ſo powerfully in the courſe of the ſucceeding ſpring, that a conſiderable number of buds or branches will ſhoot forth round the ſtump, which, with proper care and attention, may be trained to many valuable purpoſes, either ſtrait or crooked, for knee-timber or other uſes: and, by retaining only as many of theſe ſhoots as are deſigned to grow for any particular intention, more than one half will be ſaved, in point of time, according to the proportions of common growth: for if a young tree be planted in a ſoil equal in quality to the ſcite of the old ſtump, the ſhoot, growing from the latter, will, in eight or ten years, attain to a ſize, which the ſingle plant will hardly acquire in twice that period. There are alſo many uſeful purpoſes of huſbandry, as hop-poles, and other poles uſed on various occaſions, for which a number of ſhoots may be trained from one ſtump, whoſe fertile juices will ſhortly rear an healthy and numerous offspring around it. A very particular attention, however, ſhould be paid to regulate their number, according to the ſize and vigour of the ſtump. It would certainly be proper to leave more of them at firſt, than are intended to be reſerved for final uſe, in order to draw up the ſap: if there are too few left, they will be liable to burſt, from the ſuperabundant flow of juices from the old ſtock: to prevent which inconvenience they ſhould be cut away by degrees, always applying the plaiſter as they are cut, and leaving the fineſt ſtem to produce the new tree, which will, in time, cover the old ſtump, and leave nothing but a faint kind of cicatrix at the junction of the old and new part of the tree.

It is needleſs for me to inſiſt on the great advantages which land proprietors and farmers will derive from this method of managing their woods and coppice grounds, wherever they may be. In many counties of England, coppice or underwood is an article of very great demand for charcoal, common fuel, or the purpoſes of particular manufactories, as well as to furniſh a variety of articles for huſbandry and domeſtic convenience.

It would be equally unneceſſary to repeat, what muſt be ſo evident to the moſt ordinary underſtanding, the great national advantage which may be derived from the uſe of this compoſition, by preſerving and increaſing the native ſupplies of our country for the ſupport of that navy which is to protect it. Nor need I urge to the man of taſte and the lover of landſcape beauty, what an uſeful help it may afford to the delightful and modern art of garden decoration.

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APPENDIX.

No. I.

Land Revenue Office,
April 17, 1789.

SIR,

BEING informed that you have diſcovered a method of curing defects in growing trees of all ages, which may have ſuſtained damage from any cauſe whatever, we wiſh to be favoured by you with an anſwer to the following queſtions, relative to injuries done to the bark of oak trees, and the means of preventing defects in the timber ariſing from that cauſe, *viz.*

I. Suppoſing a piece of bark of 5 or 6 inches ſquare to be cut from the ſide of an oak tree of any ſize, from 20 feet to 1 load or more, ſo as to lay the wood bare, and that letters or figures were burnt, or ſtamped with ſharp inſtruments, into the ſolid wood, where the bark was ſo taken off, and the tree left in that ſtate ſo long as it ſhould continue ſtanding, what effect do you think would be produced by ſuch proceſs upon the body of the tree; whether it would continue to grow, and increaſe in ſize in the part from which the bark was taken; or whether any, and what detriment would enſue from it to the timber, if no means were uſed to prevent it, and whether ſuch detriment, if any, would extend further than the limits of the part deprived of its bark?

II. If you ſhould be of opinion that oak trees would ſuſtain any material detriment, or become in any degree defective from the cauſe above ſtated, do you know any means by which ſuch detriment may be effectually prevented, in trees which have remained in that ſtate from 4, 5, or 6 months to a year, ſo as to reſtore the bark, and prevent the trees from becoming defective, and unfit for the uſe of the navy?

III. If you ſhould be able to ſuggeſt a complete remedy for ſuch defects, and if the remedy would be effected by means peculiar to yourſelf, and unknown to others, we wiſh to know if you would be willing to undertake to apply it, or ſuperintend, or direct the application of it by perſons properly inſtructed by yourſelf, to any number of trees that might require it in any of the royal foreſts?

IV. In caſe there ſhould be occaſion to apply ſuch a remedy to a very conſiderable number of trees in the ſtate above deſcribed, we wiſh to know, as nearly as poſſible, what expence the application would be attended with, by the hundred, or thouſand, or any given number of trees, including labour, materials, and every incidental expence.

We ſhall be glad to receive an anſwer to theſe enquiries with all convenient ſpeed, and are,

Sir,
Your moſt obedient ſervants,
JNO. CALL.
JOHN FORDYCE.

Mr. Forſyth.

No. II.

To the Honourable the Commiſſioners of the Land Revenue.

HONOURED SIRS,

TO the letter you have been pleaſed to honour me with, I beg in general to ſay, that from many years attention to fruit and foreſt trees, I have obſerved every wound, bruiſe, or injury; even the wanton cutting of the initials of a name on the bark of a tree, has been attended with miſchief, and often brought on the deſtruction of the tree, eſpecially if old. In particular I beg to ſay, that if a tree be young, Nature will exert herſelf to recover from the injury; but if the tree be old, it will ceaſe to grow about the injured part, will not increaſe in ſize, the wound will daily increaſe, and in time deſtroy all the timber of the tree.

In anſwer to the ſecond queſtion, I beg to ſay, that oak trees are equally liable to decay and detriment as all other trees, though their decay will be proportionably ſlow, as they are leſs porous than many other trees of our iſland; though I ſhould add, that after oak trees are ſo far decayed as to hold water, their decay is as rapid as moſt other trees. In anſwer to the queſtion, "Do you know any means by which "ſuch detriment may be effectually pre-"vented?" I beg to ſay, that after many years cloſe application, and ſtrictly critical obſervation, I am fully convinced, that upon the exciſion of the decayed part, and the application of a compoſition, it is poſſible to heal any wounded tree, and even to reſtore it to its former health, if there be only an inch or two of bark remaining to carry on the circulation of the vegetable œconomy. This is no theory, but is demonſtrated by a great variety of experiments on fruit and foreſt trees, in his Majeſty's gardens at Kenſington, now under my care; and which trees, upon examination, have convinced all thoſe who viewed them, of the practicability of producing the fineſt, cleaneſt, and moſt prolific branches from ſtumps in a ſtate of decay: and with confidence I can aſſert, that I have ſucceeded ſo well with his Majeſty's fruit trees, that by cutting out the diſeaſed and dead wood, the trees have produced more, and finer fruit in two and three years, than a tree newly planted will in thirteen or fourteen years; and this advantageous circumſtance is equally viſible in the experiments I have made on elms, where nothing remained but the bark. The oak, from experience, I find equally as curable as any other tree, the bark reſtored, and the trees rendered as fit for the navy, as though they never had been injured.

In anſwer to the third queſtion, I ſay, that I am able to "ſuggeſt a complete remedy for the defects," and that remedy I ſuppoſe to be known only to myſelf, as it is not a ſecret drawn from books, or learned from men, but the effects of cloſe application, and repeated experiments. As to undertaking the application of the remedy, I muſt requeſt you will have the goodneſs to permit me to ſay, that as a ſervant of his Majeſty, I do not think myſelf at liberty to form any engagement that muſt inevitably call me for a time from his Majeſty's ſervice in his Royal Gardens at Kenſington; but ſhould his Majeſty be graciouſly pleaſed to think my ſervices would be productive of a national good, and will condeſcend to permit me to

be

Mr Johnson
47 York St

be abſent, I ſhall with the greateſt pleaſure and alacrity engage in the undertaking.

I beg permiſſion to lay before your Honourable Board, ſeveral ſpecimens of parts of trees which have been injured in a manner ſimilar to thoſe you have alluded to. Others which have been healed by the method I have before mentioned. But the moſt effectual means of demonſtrating the utility of this application, is the many fruit and foreſt trees now growing in his Majeſty's Royal Gardens at Kenſington, which I ſhall be happy to ſhew you.

Your Honourable Board, conſidering the ſhortneſs of time, will, I truſt, make every allowance for any inaccuracy in this anſwer to the letter you favoured me with, and permit me to ſubſcribe myſelf,

with the greateſt reſpect,
your moſt obedient
humble ſervant,
Wm. FORSYTH.

Royal Gardens, Kenſington,
April 24, 1789.

To the Hon. the Commiſſioners
of the Land Revenue.

Land Revenue Office,
April 25, 1789.

SIR,

WE have received your letter of yeſterday's date, which contains a very clear and ſatisfactory anſwer to our enquiries reſpecting the effects of injuries done to the bark of oak trees, and the means of preventing damage to the timber from that cauſe; and the ſpecimens ſent with your letter afford the moſt convincing proofs both of the deſtructive conſequences ariſing from even ſlight injuries to the bark, when no means are uſed to prevent them, and of the efficacy of your diſcovery for preventing and curing defects in timber proceeding from that ſource: but we obſerve that you have not given an anſwer to our enquiry as to the expence which the application of the remedy you have diſcovered would be attended with, by the hundred, or thouſand, or any given number of trees, in caſe there ſhould be occaſion to apply it to a very conſiderable number: we therefore repeat our requeſt that you will be ſo good as to inform us, as nearly as you can, whereabouts would be the expence of ſuch application, including labour, materials, and all incidental charges, but excluſive of any reward to yourſelf for diſcloſing the compoſition for the benefit of the public, which we conceive ſhould be given ſeparately.

We are,
Sir,
your moſt obedient ſervants,
JNO. CALL.
JOHN FORDYCE.

Mr. William Forſyth.

No. III.

To the Honourable the Commiſſioners of the Land Revenue.

HONOURED SIRS,

I PRESUME I need not again aſſign the reaſon why I omitted, in my former letter, mentioning the expence which will be incurred by cutting out the injured parts of the trees, and the application of my compoſition. I have endeavoured to think of every probable charge that will accrue; and, upon, an accurate calculation am convinced it will not exceed ſixpence per tree. It may not be improper here to obſerve that this calculation includes the labour of the men for the operation, the compoſition, and the application of it, and alſo an after review, that the healing of the trees are going on well; but I ſhould alſo obſerve that, in this expence I have not put down any thing for myſelf, leaving that wholly and altogether to your further conſideration.

I am,
honoured Sirs,
with great reſpect,
your moſt obedient,
humble ſervant,
W^{M}. FORSYTH.

Royal Gardens, Kenſington,
April 28, 1789.

No. IV.

24th July, 1789.

RESOLVED,

THAT an humble Addreſs be preſented to his Majeſty, that he will be graciouſly pleaſed to give directions for making ſuch enquiries as ſhall be thought neceſſary for the purpoſe of aſcertaining the efficacy of a remedy invented by William Forſyth, for curing defects in trees, ariſing from injuries in the bark; and in caſe the ſame ſhall appear likely to be of public utility, to order ſuch recompence to be made to the ſaid William Forſyth on the diſcloſure thereof, as his Majeſty ſhall judge proper, and to aſſure his Majeſty that this Houſe will make good the ſame.

No. V.

(COPY.)

Land Revenue Office, Scotland Yard,
December 11, 1790.

MY LORDS AND GENTLEMEN,

HAVING repreſented to the Lords Commiſſioners of his Majeſty's Treaſury, that in purſuance of their lordſhips' deſire, we had written to the ſeveral noblemen and gentlemen mentioned in the liſt, of which a copy was ſent to each of you, requeſting to know whether they would have the goodneſs to make the neceſſary examinations and inquiries, to aſcertain the effect of the experiments made by Mr. Forſyth, of the compoſition diſcovered by him for curing defects in trees; and that twelve of thoſe noblemen and gentlemen, hereunder named, and to whom this letter is addreſſed, had ſignified their willingneſs to aſſiſt in the propoſed examination; we have now the honour to inform you, that their lordſhips have been pleaſed to ſignify to us, that they approve of the examination being made by thoſe noblemen and gentlemen, or any ſeven or more of them; and to requeſt that you will be pleaſed to take ſuch ſteps, as you ſhall think neceſſary, for aſcertaining the efficacy of the ſaid compoſition, for curing injuries and defects in trees, and to addreſs the reſult of your examination to the Lords of the Treaſury.

Among the uſes to which the compoſition in queſtion is ſaid to be applicable, that which appears to us more immediately connected with the objects referred by Parliament to our conſideration, is the cure of injuries and defects in foreſt trees, eſpecially the oak; and we beg leave particularly to recommend it to you to examine.

Whether the compoſition appears to be efficacious for the purpoſe of reſtoring the bark of an oak tree which has been either cut or accidentally torn off, ſo as to prevent ſuch injuries or defects in the timber, as are commonly found to proceed from that cauſe.

And whether the application of the compoſition to the parts of foreſt trees, where limbs or branches have been cut or torn off, appears to be efficacious for the preventing or curing injuries and defects in the timber, proceeding from that cauſe.

We preſume, with great deference, that you will think it proper to point out any other uſes to which the compoſition may appear to you to be applicable, with advantage to the public; and we requeſt that you will be pleaſed to favour us with a copy of your reſolutions, or report to the Treaſury thereon.

We have the honour to be,
my lords and gentlemen,
your moſt obedient humble ſervants,
CHA^s. MIDDLETON.
JN^o. CALL.
JOHN FORDYCE.

The Marquis of Abercorn.
Earl of Upper Oſſory.
Lord Viſcount Barrington.
Lord Frederick Campbell.
Sir Geo. Yonge, Bart. K. B.
John Rolle, Eſq;
Philip Stephens, Eſq;
C. M. Pierrepont, Eſq;
William Pulteney, Eſq;
Robert Barclay, Eſq;
Hans Sloane, Eſq;
William Mainwaring, Eſq;

To the Lords Commiſſioners of his Majeſty's Treaſury.

MY LORDS,

HAVING met on Saturday, at Kenſington, in compliance with the deſires of your Lordſhips, communicated to us by the Commiſſioners of the Land Revenue, we endeavoured to take every meaſure for the inveſtigation requeſted of us that the time and circumſtances permitted; and we conceive that the beſt and moſt ſatisfactory mode of reporting to your Lordſhips the reſult of that inveſtigation, will be to ſpecify, as ſhortly as may be, the ſteps we took, the obſervations we made, and our opinions, founded both upon what we ourſelves ſaw, and upon ſuch document as appeared to us authentic and convincing.

After referring to the laſt letter addreſſed to us by the Commiſſioners, in order that we might keep in view, as much as poſſible, the objects more particularly recommended to our attention, we proceeded firſt to read a ſtatement by Mr. Forſyth, of the properties of his compoſition, and then to inſpect and examine the various ſpecimens and documents laid before us by him, tending to prove and illuſtrate thoſe properties.

Our inveſtigation, thus far, having proved as ſatisfactory as the nature of it admitted, we thought it right to require

Mr. Forſyth to ſhew us ſuch trees in Kenſington Gardens as (having been injured or decayed by whatever cauſe) had been benefited by the application of this compoſition, and we deſired him to ſhew us what ſpecimens he could of ſuch trees, in all the ſtages of their amendment and recovery. In conſequence of this requiſition, we were conducted to many foreſt trees of different kinds, (viz. elms, limes, and horſechesnuts) in which holes and wounds, in ſome inſtances ſeveral feet in length, and of a conſiderable width and depth, had been completely filled up with ſound wood, ſo as the outline of the wound remained barely diſcernible in the bark. We examined many others in an evident ſtate of progreſs towards a ſimilar cure, and we could not diſcover any one of the experiments that fell under our obſervation, of which we had the leaſt reaſon to doubt the ſucceſs. We examined alſo ſeveral experiments upon trees which, ſtanding near each other, had been cut down, and to the ſtems of which the compoſition had been applied, while the others had been left to nature: the uniform reſult of theſe experiments appeared, that thoſe ſtems to which the compoſition had been applied, had ſhot up into healthy vigorous trees, in far leſs time than we ſhould have conceived poſſible: while thoſe left to unaſſiſted nature, had only produced irregular, unhealthy ſhoots, and were apparently in a ſtate of decay. Several experiments had alſo been made on decayed and hollow ſtumps (where little or nothing but bark remained) of elms of very conſiderable ſize and age: from theſe ſtumps, by the application of the compoſition, healthy trees have iſſued, which have, in the ſpace of five, ſix, ſeven, or eight years, attained to a ſize and height which it appears to us that trees ſown or planted ſeldom attain to in thrice the time. With a view to aſcertain, as far as was in our power, the quality of that wood which by the application of the compoſition had been formed in the decayed and injured parts of trees, we cut pieces of it out, and compared them with other pieces cut out of the original wood of the ſame trees, and, after as accurate a ſecreting and compariſon as we were enabled to make, we could not diſcover any difference either in the colour or texture.

Upon our obſerving to Mr. Forſyth that we had not yet ſeen any ſpecimens of the operations of his compoſition upon oak trees, he informed us, that having at firſt confined his experiments to other trees, which were in a ſtate of greater decay, he had none of the ſame date (viz. from two to eight years) to ſhew us, but that we might ſee many ſpecimens of near two years ſtanding, equal in their progreſs to the reſt: accordingly we examined various experiments upon oaks; of which the progreſſive ſtate was ſo perfectly ſimilar to that of the other ſpecies of trees, that we ſhould not be juſtified in any doubt upon that head: the event, alſo, of comparing the new wood with the old was the ſame.

To report at large our obſervations upon the effects of the compoſition applied to different fruit trees, would be little more than a repetition of what we have already ſaid; the time of the year would only allow us to remark the rapid growth of the branches and ſhoots wherever the compoſition had been applied to the moſt decayed and injured ſtems.

We deem it unneceſſary to enter into any detail of the collateral information, and documents which confirmed the impreſſions reſulting from our perſonal obſervations, perſuaded that your Lordſhips will believe we omitted no means in our power to form our judgments.

We will therefore only add, that from all we ſaw and heard, we have reaſon to believe, and conſequently do not heſitate to expreſs our conviction, that Mr. Forſyth's compoſition is a diſcovery which may be highly beneficial both to individuals and the public.

We have the honour to be
your Lordſhips' obedient ſervants,
ABERCORN,
FRED. CAMPBELL.
WILLIAM PULTENEY.
CHA^{S}. PIERREPONT.
HANS SLOANE.
GEORGE YONGE.
PHILIP STEPHENS.
ROBERT BARCLAY.
JOHN ROLLE.
WILL^{M}. MAINWARING.

(COPY)

No. VI.*

IN conſequence of an Addreſs of the Houſe of Commons to his Majeſty, and of an examination made by

The Marquis of Abercorn,
Lord Frederick Campbell,
William Pulteney, Eſq;
Charles Pierrepont, Eſq;
Hans Sloane, Eſq;
Sir George Yonge, Bart.
Philip Stephens, Eſq;
Robert Barclay, Eſq;
John Rolle, Eſq; and
William Mainwaring, Eſq;

and their report to the Lords Commiſſioners of his Majeſty's Treaſury, reſpecting the efficacy of a compoſition diſcovered by Mr. William Forſyth, for curing injuries and defects in trees, his Majeſty has been pleaſed to grant a reward to Mr. Forſyth, for diſcloſing the method of making and uſing that compoſition, and the following directions for that purpoſe are publiſhed accordingly.

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* By miſtake, the reference to this paper, page 11, is marked No. VIII.

Royal Gardens, Kenſington,
May 11*th*, 1791.

DIRECTIONS for making a Compoſition for curing Diſeaſes, Defects, and Injuries, in all Kinds of Fruit and Foreſt Trees, and the Method of preparing the Trees, and laying on the Compoſition, by WILLIAM FORSYTH.

Take one buſhel of freſh cow dung, half a buſhel of lime rubbiſh of old buildings, (that from the cielings of rooms is preferable) half a buſhel of wood aſhes, and a ſixteenth part of a buſhel of pit or river ſand: the three laſt articles are to be ſifted fine before they are mixed, then work them well together with a ſpade, and afterwards with a wooden beater, until the ſtuff is very ſmooth, like fine plaiſter uſed for the cielings of rooms.

The Compoſition being thus made, care muſt be taken to prepare the tree properly for its application, by cutting away all the dead, decayed, and injured part, till you come to the freſh, ſound wood, leaving the ſurface of the wood very ſmooth, and rounding off the edges of the bark with a draw-knife, or other inſtrument, perfectly ſmooth, which muſt be particularly attended to; then lay on the plaiſter, about one eighth of an inch thick all over the part where the wood or bark has been ſo cut away, finiſhing off the edges as thin as poſſible: then take a quantity of dry powder of wood aſhes, mixed with a ſixth part of the ſame quantity of the aſhes of burnt bones; put it into a tin box, with holes in the top, and ſhake the powder on the ſurface of the plaiſter, till the whole is covered over with it, letting it remain for half an hour, to abſorb the moiſture, then apply more powder, rubbing it on gently with the hand, and repeating the application of the powder till the whole plaiſter becomes a dry ſmooth ſurface.

All trees cut down near the ground, ſhould have the ſurface made quite ſmooth, rounding it off in a ſmall degree, as before mentioned, and the dry powder directed to be uſed afterwards ſhould have an equal quantity of powder of alabaſter mixed with it, in order the better to reſiſt the dripping of trees, and heavy rains.

If any of the compoſition be left for a future occaſion, it ſhould be kept in a tub, or other veſſel, and urine of any kind poured on it, ſo as to cover the ſurface; otherwiſe the atmoſphere will greatly hurt the efficacy of the application.

Where lime-rubbiſh of old buildings cannot be eaſily got, take pounded chalk, or common lime, after having been ſlacked a month at leaſt.

As the growth of the tree will gradually affect the plaiſter, by raiſing up its edges next the bark, care ſhould be taken, where that happens, to rub it over with the finger, when occaſion may require, (which is beſt done when moiſtened by rain) that the plaiſter may be kept whole, to prevent the air and wet from penetrating into the wound.

WILLIAM FORSYTH.

WILLIAM FORSYTH, of Kenſington, in the county of Middleſex, gardener, maketh oath and ſaith, that the foregoing is a true account of the method of making and uſing the compoſition diſcovered by him for curing diſeaſes, defects, and injuries, in fruit and foreſt trees, and which compoſition was applied by him to the trees in his Majeſty's Gardens at Kenſington, ſhewn to the noblemen and gentlemen to whom it was referred to examine the efficacy of the ſaid compoſition.

WILLIAM FORSYTH.

Sworn at the Land Revenue Office,
in Scotland Yard, the Eleventh
Day of May, 1791, *before Us,*

CHARLES MIDDLETON,
JOHN CALL,
JOHN FORDYCE.

FINIS.

9 JAN 57